

Slide 1: Addressing Tensions When Popular Media and Evidence-Based Care Collide

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Slide 2: Infoxication

We are drowning people who are thirsty for just a sip of balanced information with an overwhelming daily fire hose of health care news/information that is inaccurate, imbalanced, incomplete...harmful.

Slide 3: HealthNewsReview.org: Criteria for Grading News Stories

Does the story explain...

- What's the total cost?
- How often do benefits occur?
- How often do harms occur?
- How strong is the evidence?
- Is the condition exaggerated?
- Is this really a new approach?
- Is it available?
- Are there alternative choices?
- Who's promoting this?
- Do they have a financial conflict of interest?

Slide 4: HealthNewsReview.org: Principal Findings

- After evaluating 1,800 stories over 6+ years, about 70 percent of the stories fail to:
 - Discuss costs
 - Quantify potential benefits
 - Quantify potential harms
 - Evaluate the quality of the evidence

Slide 5: Image titled: Informed and Shared Decision Making When Clinical Evidence and Conventional Wisdom Collide: Recognizing and Reckoning With Tension Surrounding Communication of Evidence

- Exaggerate or emphasize benefits of interventions
- Ignore or minimize potential harms

Source: Eisenberg Center Conference Series 2012: Supporting Informed and Shared Decision Making When Clinical Evidence and Conventional Wisdom Collide. Effective Health Care Program Web site. (<http://www.effectivehealthcare.ahrq.gov>)

Slide 6: Overarching Themes (1 of 2)

- There is far too much “stenography” in the reporting of health news.
- There is not enough independent vetting of studies in journals.
 - Deification of big names/big journals
 - Publicizing not-ready-for-prime-time research
 - Journals never intended to be sources of daily news
 - Unaware of or ignoring:
 - Retractions, research fraud, fabrication, and falsification of data
 - Consequences of unpublished data
 - Ghostwriting of journal articles

Slide 7: Overarching Themes (2 of 2)

- Failure to evaluate inherently weak science
- Idolatry of the surrogate
- Using causal language to describe observational studies
- Exaggerating effect size
 - Using relative, not absolute, risk-reduction numbers
- Reckless extrapolation
 - Predicting what may happen in humans — and soon — based on very preliminary animal or laboratory science
- Lack of awareness of conflicts of interest & other ethical issues
 - Commercialization of research: contract research organizations, commercial Institutional Review Boards, and medical education and communication companies

Slide 8: Screening Stories Receive the Worst News Coverage: Breast Cancer (1 of 6)

- The news coverage of this recommendation was perhaps the most biased coverage I’ve seen in 38 years:
U.S. Preventive Services Task Force. Screening for breast cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med* 2009 Nov 17;151(10):716-26, W-236. PMID: 19920272.
- The recommendation caused, in the words of the *Annals of Internal Medicine* editors, a “media cacophony.”

Slide 9: Screening Stories Receive the Worst News Coverage: Breast Cancer (2 of 6)

- Much of the media cacophony missed what the U.S. Preventive Services Task Force actually wrote:

Source: Eisenberg Center Conference Series 2012: Supporting Informed and Shared Decision Making When Clinical Evidence and Conventional Wisdom Collide. Effective Health Care Program Web site. (<http://www.effectivehealthcare.ahrq.gov>)

- “The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms.”
- However, many in the media distorted that shared decision-making message with their own opinions.

**Slide 10: Screening Stories Receive the Worst News Coverage:
Breast Cancer (3 of 6)**

- Sanjay Gupta, M.D., chief medical correspondent for CNN, interviewing Lucy Marion, R.N., Ph.D., of the U.S. Preventive Services Task Force on November 18, 2009:
“Are you comfortable with what you're saying? You're a nurse. What you're saying is that some lives are not worth it — that's why we're changing these recommendations. That's an incredibly frightening thing to hear from someone like yourself. Is that what you're saying?”
- Elizabeth Cohen, senior medical correspondent for CNN, on Twitter:
“To all my sisters over 40: we need mammos once a year. 1 out of 3 don't get 'em, so spread the word.”

**Slide 11: Screening Stories Receive the Worst News Coverage:
Breast Cancer (4 of 6)**

- In a 2011 episode of CBS News The Early Show, Rebecca Jarvis interviewed Jennifer Ashton, M.D., medical correspondent for CBS news, and Nancy Brinker, CEO of the Komen Foundation. Dr. Ashton wore a Komen Foundation lapel pin during the interview and did not challenge Ms. Brinker when she said:
“Well, we've had a conclusion for many, many years at Susan G. Komen, almost a generation. Screening saves lives. The 5-year survival rates for breast cancer diagnosed early is 98 percent...and this is largely due to screening and early diagnosis.”

**Slide 12: Screening Stories Receive the Worst News Coverage:
Breast Cancer (5 of 6)**

“All screening programmes do harm; some do good as well.”
— Dr. J. A. Muir Gray

**Slide 13: Screening Stories Receive the Worst News Coverage:
Breast Cancer (6 of 6)**

- Some headlines from news coverage of mammogram parties:

Source: Eisenberg Center Conference Series 2012: Supporting Informed and Shared Decision Making When Clinical Evidence and Conventional Wisdom Collide. Effective Health Care Program Web site.
(<http://www.effectivehealthcare.ahrq.gov>)

- CBS News Chicago: “Mammogram Parties Take the Edge Off Procedure”
- ABC News Los Angeles: “‘Mammogram Parties’ Take Fear Out of Procedure”
- St. Paul Pioneer Press: “Hastings Hospital’s Mammogram Parties Offer Women a Dose of Pampering To Calm the Nerves”
- Information about breast cancer and early detection is provided at these parties to help educate women about how finding breast cancer early saves lives.
- The spa-like experience at these parties may help women be less nervous about undergoing mammography.
- The confusion women may have about false-positive results, overdiagnosis of breast cancer, or a diagnosis of ductal carcinoma in situ, however, is not addressed.

Slide 14: Screening Stories Receive the Worst News Coverage: Prostate Cancer (1 of 2)

- This excerpt comes from an article, “Cancer Society Casts Doubt on Value of Prostate Cancer Test,”¹ published on the Fox News Web site on March 3 2010:
 “Dr. David Samadi, a Fox News contributor and chief of Robotics and Minimally Invasive Surgery at Mount Sinai School of Medicine in [New York], said he thinks the new guidelines could cause unnecessary deaths. “In my practice, we find men in their 30s and 40s [who] are at high-risk and develop prostate cancer.”

Slide 15: Screening Stories Receive the Worst News Coverage: Prostate Cancer (2 of 2)

- Balance is needed in anecdotes, as shown by the story of Tim Glynn published in The New York Times Magazine¹:
 - He initially chose active surveillance after positive results from a prostate-specific antigen test and a prostate biopsy.
 - He eventually decided to undergo surgery: “When you see the people around you falling apart, you sort of have to get treated for them, so you can go back to a normal life.”
 - “Fourteen years later, he still takes drugs for impotence. It would be more than a year following surgery before he had the energy to play a set of tennis again. ‘The toll that this took on energy and physicality was like being aged five years,’ he says.”
 - “One way to look at Glynn’s story is as a success. His cancer was removed. His impotence is being managed. But Glynn sees it

differently, and so do many other men who have been treated for prostate cancer.”

Screen 16: Patient Viewpoints on Cancer Screening Controversies (1 of 2)

- William J. Casarella, M.D., published an account of his experiences after undergoing a colonographic examination with computerized tomography as part of a routine annual physical.¹
 - A virtual colonoscopy gave negative results, but suspicious lesions were visualized in one kidney, the liver, and both lungs.
 - The kidney and liver lesions were considered benign after a liver biopsy, a positron emission tomography scan, and additional computerized tomography scans.
 - The lung lesions led to major lung surgery, which detected no malignancy: “I awoke in the recovery room after 5 hours, with a chest tube, a Foley catheter, a subclavian central venous catheter, a nasal oxygen catheter, an epidural catheter, an arterial catheter, subcutaneously administered heparin, a constant infusion of prophylactic antibiotics, and patient-controlled analgesia with intravenously administered narcotics.... Excruciating pain.”
 - The total cost caused by these “incidentalomas” was \$50,000.

Slide 17: Patient Viewpoints on Cancer Screening Controversies (2 of 2)

- “Dr. Stephen Smith, Professor emeritus of family medicine at Brown University School of Medicine, tells his physician not to order a PSA [prostate-specific antigen] blood test or an annual electrocardiogram since neither test has been shown to save lives.”
- “Dr. Rita Redberg, professor of medicine at the University of California, San Francisco, and editor of the prestigious Archives of Internal Medicine, has no intention of having a screening mammogram even though her 50th birthday has come and gone. That’s the age at which women are advised to get one. But, says Redberg, they detect too many false positives (suspicious spots that turn out, upon biopsy, to be nothing) and tumors that might regress on their own, and there is little if any evidence that they save lives.”

Slide 18: An Example of Good Health Journalism

- A blog, “What Do Engaged Patients Do?,” that was published on the State of Health Web site on July 23, 2012:
 - Discussed a woman with a diagnosis of ductal carcinoma in situ who chose to pursue active surveillance rather than an immediate, aggressive intervention, such as bilateral prophylactic mastectomy

- Described the shared decision-making program at the University of California, San Francisco, that helped her understand the trade-offs of her decision

Slide 19: Journalists Should Analyze the Marketing of Cancer Screening

- In 2010, after the National Lung Screening Trial¹ results were published, the American Cancer Society posted on its blog:
“...[O]ur greatest fear was that forces with an economic interest in the test would sidestep the scientific process and use the release of the data to start promoting CT [computerized tomography] scans. Frankly, even we are surprised how quickly that has happened.”

Slide 20: Prizes for Prostates

- The Prostate Club for Men, instituted by the Roswell Park Cancer Center in Buffalo, New York, offered prizes such as hockey tickets to any man who could prove that he had a discussion with his doctor about prostate cancer screening.
- The Atlanta Hawks basketball team offered two free tickets to any man who pledged to get screened for prostate cancer.

Slide 21: Journalists could help people understand and deal with the clashes between:

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|---------------------------------------------------------------------------------------------|-----------------------------------------------------|
| • Science | • Intuition |
| • Evidence | • Emotion |
| • Data | • Anecdote |
| • Recommendations for an entire population | • Decision making by an individual |
| • What we can prove | • What we believe, wish, or hope |
| • Grasping uncertainty and helping people apply critical thinking to decision-making issues | • Promoting false certainty where it does not exist |

Slide 22: Resources for Journalists

- NIH Office of Disease Prevention Medicine in the Media Course
- MIT Medical Evidence Boot Camp Association of Health Care Journalists
- NNT Web site (www.thennt.com)
- California Endowment Health Journalism Fellowships and the Reporting on Health Web site (www.reportingonhealth.org)
- HealthNewsReview.org

Slide 23:

- Guide
Schwitzer G. Covering medical research: a guide for reporting on studies. Columbia, MO: Association of Health Care Journalists; 2010.
- Tool Kit (Examples)
 - Does The Language Fit The Evidence? – Association Versus Causation
 - Resources for Reporting on Costs of Medical Interventions
 - 7 Words (and more) You Shouldn't Use in Medical News
 - Problems with Reporting on News from Scientific Meetings
 - Absolute vs. Relative Risk
 - Number Needed to Treat
 - Single Source Stories
 - FDA Approval Not Guaranteed
 - Phases of Drug Trials
 - Animal & Lab Studies
- List of Industry-Independent Experts

Slide 24:

"I honestly believe it is better to know nothing than to know what ain't so."

— Josh Billings
in Everybody's Friend